there were higher in-hospital mortality (10.7% vs 5.9%, P<0.05), higher angina readmission rate (28.6% vs 15.7%, P<0.01), and higher 1-year mortality (19.0% vs 7.8%, P<0.01) in AMI patients with high PLR.

**CONCLUSIONS** Patients with AMI and high PLR have relatively worse short-term prognosis than those with AMI and low PLR on admission.

## GW26-e0743

### Impact of Plaque Characteristics on Serial Coronary Artery Remodeling Response to Changes in Plaque Size: OCT and IVUS findings

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**OBJECTIVES** We hypothesize that the stage and underlying morphologic characteristics of atherosclerotic lesions will influence the vascular response to changes in plaque size. In this study, we analyzed baseline OCT and serial IVUS images to investigate the influence of baseline plaque characteristics on serial coronary remodeling in patients presenting with acute coronary syndrome (ACS).

**METHODS** One hundred and sixty seven ACS patients underwent both OCT and IVUS examination of a non-culprit lesion after percutaneous coronary intervention to the culprit lesion. All patients subsequently underwent repeat IVUS imaging at 12-month follow-up. According to the plaque characteristics, the slope (β) of the regression line relating EEM to plaque areas were compared by the Generalized Estimating Equations (GEE).

**RESULTS** The change in EEM area for each $mm^2$ change in plaque area (i.e. slope of the regression line) was greater for fibrous plaques compared to non-fibrous plaques but did not reach statistical significance (slopes: 1.48 vs. 1.04 $mm^2$, $p$=0.061). There was a trend towards a smaller slope of the regression line in plaques with TCFA compared to plaques without TCFA (slopes: 0.89 vs. 1.30 $mm^2$, $p$=0.070). Notably, there was a statistically significant difference in regression line slope between lesions with and without calcification, with calcified lesions showing less change in EEM area relative to change in plaque area (slopes: 0.67 vs. 1.47 $mm^2$, $p < 0.001$). The slopes were not significantly affected by the presence or absence of microvessels ($p$=0.773), cholesterol crystals ($p$=0.229), or macrophages ($p$=0.950).

**CONCLUSIONS** The capacity for coronary artery remodeling in response to plaque progression or regression varies among lesions with different baseline characteristics. Lesions with OCT-identified features associated with early-stage atherosclerosis showed a more robust capacity for arterial remodeling compared to lesions with advanced-stage atherosclerotic features.

## GW26-e0781

### Hyperhomocysteinemia is an independent predictor of long-term clinical outcomes in Chinese octogenarians with acute coronary syndrome

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**OBJECTIVES** Large research programs have been focused on the identification of new risk factors to prevent CAD, with special attention to homocysteine (Hcy), due to the known associated increased atherosclerosis, oxidative stress status and endothelial dysfunction. However, controversy still exists on the association and prognostic value between Hcy and CAD. Therefore, aim of the current study was to investigate the prognostic value of Hcy in Chinese acute coronary syndrome (ACS) octogenarians undergoing coronary angiography (CAG).

**METHODS** We enrolled 660 consecutive ACS octogenarians who underwent coronary angiography and were classified into three groups according to Hcy tertiles. The baseline characters and Hcy level were measured on admission. Survival and major adverse cardiac event (MACE) rates were calculated using the Kaplan-Meier method. Multivariate Cox regression was used to identify mortality predictors. ROC curve analysis was used to predict cut-off value of Hcy for mortality.

**RESULTS** There were 621 patients fulfilled the follow-up. The follow-up period was 28 (IQR16-38) months. Diastolic blood pressure (DBP), ratios of male, chronic renal failure (CRF) and history of myocardial infarction were higher in high plasmatic level of Hcy (H-Hcy) group than those in low (L-Hcy) and middle (M-Hcy) plasmatic level of Hcy groups (P<0.05), but no remarkable difference in other conventional risk factors (all P > 0.05). The Hcy level was positive correlated with UA level (r=0.211, P=0.001) and cys C level (r=0.212, P=0.001) and inversely correlated with eGFR (r=-0.148, P=0.018). The cumulative survival of H-Hcy group was significantly lower than that of L-Hcy and M-Hcy groups in the long term (P = 0.006). All cause mortality and MACE of H-Hcy group were higher than those of L-Hcy and M-Hcy group (P=0.0001, P=0.0008). Hcy is an independent predictor for long-term mortality(OR = 2.26, 95% CI = 1.23-4.16, P = 0.023) and MACE(OR = 1.91, 95% CI = 1.03-3.51, P = 0.039). ROC curve analysis showed that the predictive cut-off value of Hcy for mortality was 17.67μmol/L (0.667, 0.681).

**CONCLUSIONS** All cause mortality and MACE of ACS octogenarians increased with the level of plasmatic Hcy, Hcy is an important predictor for long-term mortality and MACE of ACS octogenarians.

## GW26-e1448

### Prognostic Value of Pregnancy Associated Plasma Protein-A in Elderly Patients with non-ST Segment Elevation Acute Coronary Syndrome

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**OBJECTIVES** This study sought to investigate whether pregnancy associated plasma protein-A (PAPP-A) is useful for risk assessment in elderly patients with non-ST segment elevation acute coronary syndrome (NSTE-ACS).

**METHODS** PAPP-A was measured in 455 elderly patients with non NSTE-ACS, Study and followed-up for 12 months. A cut point was according to the ROC curve, the patients was were divided into high level group and low level group, to evaluate the association between the PAPP-A and the incidence of the combined cardiovascular events.

**RESULTS** The cut point of PAPP-A was 23.5 MIU/ L, and the sensitivity and specificity of the incidence of were 66.7% and 75.0% respectively. Multivariate logistic regression analysis demonstrates that there was a correlation between the PAPP-A level and rates of the combined cardiovascular events (OR = 2.83, P = 0.006). The Cox proportional hazards regression model shows PAPP-A is an independent risk factor for prognosis of the combined cardiovascular events (HR = 2.79, P = 0.007).

**CONCLUSIONS** PAPP-A was independently associated with recurrent cardiovascular events in elderly patients with NSTE-ACS. PAPP-A may be useful for risk assessment and monitoring in populations at high risk of cardiovascular events.

## GW26-e3949

### Preliminary Clinical Experience With domestic extracorporeal shockwave myocardial revascularization therapy in Treatment of refractory angina pectoris

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**OBJECTIVES** We aimed to evaluate the safety and efficacy of domestic JC-extracorporeal shockwave myocardial revascularization(JC-ESMR) therapy for refractory angina pectoris.

**METHODS** JC-ESMR adopts the optimal density of energy treatment (0.09mJ/$mm^2$), Electrocardiography(ECG) controlled shockwave release, pulses are released only in refractory phase of the cardiac cycle, it designs the flexible, intelligent positioning system and Real-time monitoring system under echocardiography. Eighteen patients with medically refractory angina and no revascularization options were randomly divided into 2 groups. The control group (n = 10) received only medical therapy. The treatment group(n=8) were treated with JC-ESMR (3 times a week at intervals of four weeks for a total of three months, nine treatments patient in total). Efficacy was assessed by CCS grading of angina, dosage of nitroglycerin, NYHA classification, as well as ischemic burden on pharmacological SPECT at 4 months after the last JC-ESMR treatment. Safety measures included ECG, troponin, creatine kinase, and pro- brain natriuretic peptide testing.

**RESULTS** The CCS grading of angina, dosage of nitroglycerin, NYHA classification were improved in treatment group compared to control group. The perfusion evaluated by SPECT has improved statistically significant compared to control group. The JC-ESMR therapy was performed safely without any adverse events in ECG, troponin, creatine kinase, or pro- brain natriuretic peptide.

**CONCLUSIONS** This study demonstrates the JC-ESMR is a safe, effective and non-invasive new treatment for patients with refractory angina pectoris. However, larger sham-controlled trials will be required to confirm the clinical utility of this novel therapy.